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Does Education Pay the Farmer.

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That a college education is the best investment that a young farmer can make is shown by many surveys made in various parts of the country. Not only do these surveys show that a college education increases the earning capacity of the average young farmer, but they clearly indicate that a high school education is of much financial advantage. Most studies that have been made along the line of education for the farmer lead to the definite conclusion that even a common school education is of distinctly greater financial advantage than no education at all, and that the years spent in high school and college are well repaid by increased earning capacity when farm activities are undertaken.

Surveys made in such states as Georgia, Texas, Indiana, Illinois, Kansas, Iowa, Wisconsin, Missouri, Ohio, Washington, New York and Maryland answer affirmatively the question as to whether higher education pays the farmer or not. In the studies made in these states, the conclusion shows beyond question, that the more education the farmer possesses the larger is his income.

Not only does an education pay the individual but it pays the state in the greater earning capacity of its individual members, in a decrease of illiteracy, and in a higher standard of living which usually results with increased earning capacity. Education does not increase native ability but it develops it and gives greater opportunities for its expression. An educated farmer has a wider field of opportunity and a better chance to exercise his trained abilities than the untrained individual although they may have started with equal native talents.

In measuring the success of any farmer, Edgar C. Higbie has submitted eleven points that are well worthy of consideration. These are, - (1) native intelligence, (2) general education, (3) agricultural information, (4) managerial ability, (5) field and chore skills, (6) mechanical ability, (7) business ability, (8) physical capacity, (9) unpaid family labor, (10) financial success, and (11) community value. Of these eleven points, only the first may be considered as being entirely independent of training and education; all of the other ten imply some sort of education that must be acquired by the individual. By "native intelligence" is meant the original mental ability of the individual regardless of any educational influence or of any special training. It is mental alertness, thought power, with which the individual has been endowed.

General education may be formal or informal; it may mean regular schooling or an education acquired out of school. Agricultural information implies a working knowledge of the processes of agriculture acquired by attending some agricultural school, short courses, institutes, or by reading bulletins, farm papers, etc. The phase of education discussed in this phamplet and the one that forms the basis of the many quoted surveys is the formal, that is institutional or school education. The surveys used offer a very fair cross-section of the country; there are two from the South, one from the Pacific Coast, six from the Middle West and two from the East.

Texas

Dr. A Caswell Ellis of the University of Texas made a survey a few years ago in which he found that every day spent by a child in school was worth at least $9.00. Based upon the wage scale then in vogue, it was found that uneducated laborers were averaging $500.00 a year and that high school

graduates were earning $1000 per year. A forty year period of work at the above average would give $20,000 for the unskilled laborer and $40,000 for the skilled or educated one. The education of the high school graduate requires 12 years of approximately 180 days each, a total of $2,160 school days. The gain in wages, $20,000, of the educated over the uneducated worker due to these 2,160 days of schooling represents a value of $9.25 per day while instruction lasted. Every day a child stays out of school during this instructive period he is losing money, not making it.

Georgia

A very helpful and comprehensive survey was recently made in Georgia (1925) to determine as far as possible what effect upon earning capacity an agricultural education had. The examination included 1,271 farmers and the results were based upon the annual profits of those farmers. The following table gives in a general way the results obtained:

Farmers without any schooling	Earned	$ 240.00	per year
" with common school education	"	565.50	" "
" " high school education	"	664.50	" "
" " short course agricultural education	"	895.95	" "
" " agricultural college education	"	$1,254.00	" "

These figures show that an agricultural college training adds more than 500 per cent to the earning capacity of the farmer without any schooling; that it almost doubles the high school capacity and adds approximately 50 per cent earning capacity to the short course training. Those who have taken only a short course earn almost 3 times as much as those of no education at all. To put the facts in another form, when the uneducated farmer earns $100.00 the farmer with a common school education will earn $235.00, with a high school education, $255.00, with a short course education $373.00, and with a full college education $522.00.

Besides endeavoring to find the value of an education to a farmer engaged in

work on his farm, the Georgia Agricultural College also made a study of the various occupations of its graduates and their average wage increases since the establishment of the college in 1907. The following table gives the present occupations of its graduates:

Occupations	Total living graduates in various occupations.	Per cent of total living graduates in various occupations.
EXTENSION		
County Agents	66	14.6
Specialists	53	11.7
TEACHERS		
College	22	4.9
High School	104	23.0
BUSINESS		
Business Related to Agriculture	34	7.5
Business Not Related to Agriculture	39	8.6
FARMERS	41	9.1 - 18.4
RESEARCH	11	2.4
FORESTERS	8	1.8
VETERINARIANS	24	5.3
GRADUATE STUDENTS	14	3.1
HOME MAKERS	12	2.7
MINISTERS	4	.9
Other Lines	20	4.4
TOTAL	452	100.0 %

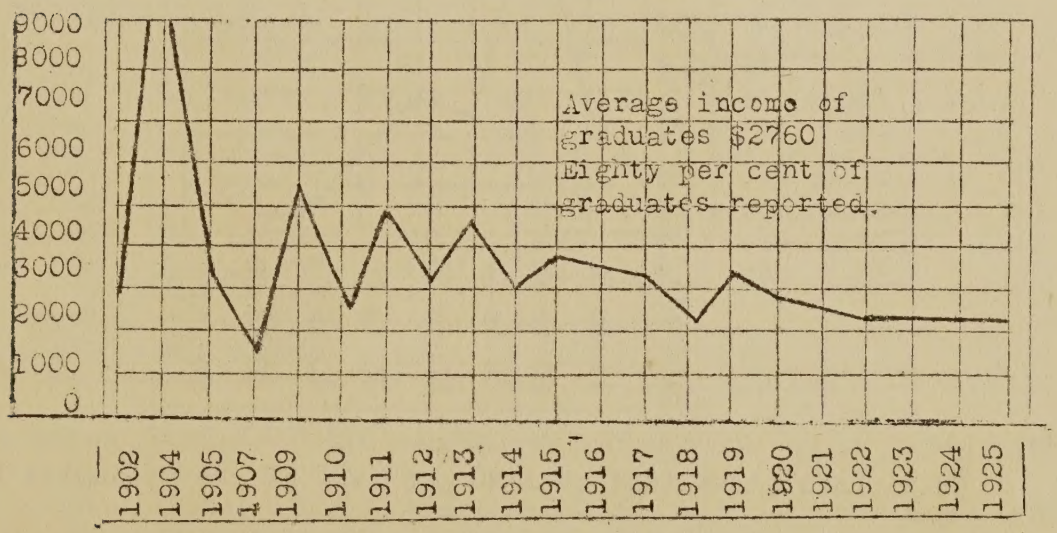
Fifty four and two tenths per cent of these graduates are now engaged in teaching. This fugure includes all extension workers who are very properly classified as teachers. Of all the graduates to date, only 13.9 per cent are engaged in work especially designated as non-agricultural. This figure includes, besides those engaged in business, all those who are classified as ministers and as "in other lines of work". The 9.1 per cent of graduates who go back to the farm and are engaged solely in farming operations seems low but it is about the average for most agricultural colleges throughout the country. When we add to this number those who actually farm some but vary their activities with other lines of endeavor, the total percentage, 18.4 becomes very respectable. The bulk of the

educational work of colleges of the status of the Georgia institution goes toward making teachers in the science and in the collateral fields, as extension agents, research workers and home makers. As the survey notes, "It is not to be understood that these other lines are not appreciated, but it rather goes to prove that agricultural and home economics training is broad in its field of opportunity".

The following chart shows the income of graduates by classes. It seems to be very irregular up to 1909 but after that date it is a fair representation of what a graduate may expect.

GEORGIA STATE AGRICULTURAL COLLEGE

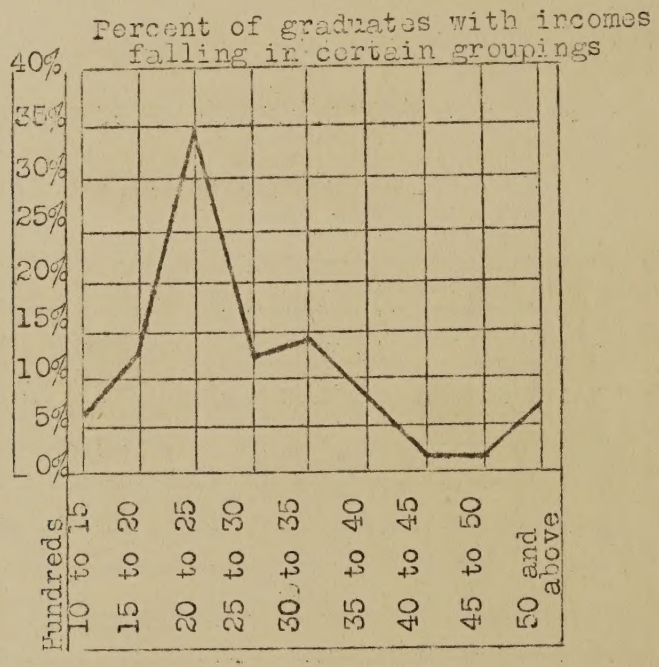
Income of graduates by classes.



It is well to remember im interpreting this chart that the college of agriculture in its present form did not come into existence umtil 1907 and that a fair interpretation of its influence should not be made until 1909 or thereabouts as the effect of the trainming of the institution would not be felt until approximately that date. The numbers im the graduating classes have increased regularly since 1909.

In studying this curve it is seen that there is a gradual increase in graduates' salaries from 1925 to 1911 with a few drops in the earlier years. From 1925 to 1919 the rise is gradual and consistent and probably represents very fairly the increased earning capacity of the graduates due to a college training. The marked drop indicated during the years 1917-19 is due to war conditions then prevalent. The drops indicated in the years 1914 and 1912 were undoubtedly due to economic depressions experienced at that time.

Georgia State Agricultural College



This chart shows that over 80 per cent of the graduates have an income of $2000.00 or more and a large per cent earning $3,000 to $5,000 and above. As the survey remarks, "This is a remarkable showing since it demonstrates that over 80 per cent of our graduates are in the upper 3 per cent of our population with respect to income". The results of these surveys show that unsurpassed opportunities are offered to graduates of an agricultural college in securing better competencies in their life work as well as opening wider fields of

constructive services for the benefit of mankind.

Indiana, Illinois and Iowa

The Department of Agriculture made a survey in 1914 of three representative areas located in the above states to learn as far as possible how the farmers in this section of our country were prospering. The survey dealt almost entirely with farm management under ownership and tenancy occupation.

In studying the relation of education of the farmer to his income the bulletin says: "Unquestionably one of the best things for a young man who intends to become a farmer is a good high-school education. Many farmers with very little schooling succeed but these same men would do better if they had had the opportunity of further training. No one ever hears a farmer regret that he spent a part of his early life in school."

The following table shows the relation of the owner's or tenant's education to his income.

-- Relation of the owner's or tenant's education to his income on farms in Indiana, Illinois, and Iowa.

Education	Operated by owners (273 farms)					Operated by tenants (247 farms).				
	No. farms	Av. size acres	Av. capital	Av. labor inc	Av. age	No farms	Av. size acres	Av. capital	Av. labor inc	Av. age
None at school	4	91	$15,039	-$586	55	4	118	$1,650	$ 680	40
Common school	214	165	27,494	301	51	186	167	2,200	742	38
High school	46	208	37,725	651	46	51	190	3,203	1,268	33
College, etc.	9	240	42,781	796	53	6	294	3,351	1,721	41
Total or average	273	178	30,606	408	49	247	172	2,431	870	37

Seventy seven percent of the owners and tenants listed in this chart attended some common school; only 4 owners and 4 tenants were without any schooling at all. One out of every 35 went to college and 18 percent attended high school. Peculiarly the tenants had received more education than the owners, a rather unlooked for condition. Only 20 percent of the owners had had such training while 23 per cent of the tenants were schooled to some degree. The men receiving the best training, as indicated in this group made the largest incomes, although they were helped to some extent by their larger investments; They had larger farms and greater capital.

In order to further learn the influence of education upon earning capacity, the tenants having the same general training were placed in groups according to the amount of capital they had invested. The following table shows the relation of profits of tenants of equal capital.

Relation of education to profuts of tenants with equal capital.

Units of Compensation	$1,000 and less		$1,001 to $2,000		$2,001 to $3,000		Over $3,000	
	Common School	High school	Common school	High school	Common school	High school	Common school	High school
Number of farms.	23	3	73	19	54	12	40	23
Average size acres.	69	109	138	123	184	165	251	266
Average age of farmer	36.4	29.3	36.9	31.1	39.8	28.3	39,5	36.8
Average capital	$686	$730	$1,517	$1,549	$2,427	$2,513	$4,023	$5,095
Average labor income	318	259	561	659	864	866	1,086	2,087

In studying this table, a difference is found in favor of the high school graduate, especially those having a capital of over $3000. These graduates made almost double the labor income that the common school graduates did. It is also interesting to note that their average age at this period of their earning capacity was about 3 years under that of the common school graduates.

Kansas

In Kansas, 1,237 farms were investigated by the agricultural college. The

average labor earnings were found to be as follows:

Education of the farmers	Annual labor income
Common school	$ 422.00
High School	545.00
College, partial course	859.00
Completed college	1,452.00

A college graduate, according to this investigation, earned over three times as much as a common school graduate and almost three times as much as a high school graduate. A completed college course represented a gain of over 50 per cent over a partial course.

With an average working life of forty (40) years, the usual figure accepted by statisticians, the average life earnings of these farmers would be:-

Education of farmers.	Earnings during working life.
Common school	$16,880.00
High School	22,160.00
College, partial course	34,360.00
Completed college	58,080.00

These figures take no cognizance of farm practice improvements during the space of the forty (40) years, but are based upon the earning capacity for the single year. It is fair to presume that earning capacities would increase during the forty (40) years due to farming experiences, and it is also fair to presume that the increases would be larger with the better trained men owing to their greater mental capacities.

Missouri

The Agricultural College of Missouri in 1915 investigated a number of farms in Johnson County in order to learn the relation education bore to earning capacity among rural farm workers. The farmers studied were divided into two (2) groups, 554 farms whose operators had received only a common school education and 102 farms whose operators had been trained in higher institutions than the common rural school. The amount of training received by the second group averaged about two years, mostly in the high schools of the state. The number of operatives that received a college education was so small as to be practically negligible. The

following table represents very well the results of this survey:

Farm Operations of Men of Different Degrees of Education

	District school only	More than district school
Number of farms	554	102
Average size acres	134.0	178.2
Area		
Owned acres	83.4	140.4
Rented acres	50.6	37.8
Owned per cent	62.2	78.78
Rented per cent	37.8	21.22
Investment per acre	$80.	$89.
Total value	$10,720.	$15,859.80
Crop acres		
Per animal Unit[1]	4.3	3.6
Per man	53.5	61.2
Per horse	14.6	14.8
Productive work unit[2]		
Per man	147.0	171.7
Per horse	42.5	43.2
Percentage of receipts from crops	37.1	30.7
Crop index[3]	97.0	102.0
Labor income[4]	$382	$655
Family living	$390	$449

[1]An animal unit is a horse, cow, five mature hogs, or seven mature sheep; two young animals are regarded as equal to one mature animal of the same kind, on the basis of feed and the manure produced. This unit is only approximate at best.

[2]A productive work unit is a 10-hour day of productive labor, done by either a man or a horse. It includes work on live stock, on farm crops, or on the improvement of land, but not on work stock; on the repairs of fences, buildings and machinery; or on anything else included in the maintenance of the farm.

[3]A crop index of 97 simply means that the yield per acre of all crops on this farm or group of farms is 97 per cent as great as the average yield of the groups of the region.

[4]Labor income is the farmer's net return after paying from his gross income all general running expenses, including also interest at 5 per cent, depreciation, and wages for hired men and members of his family, but excluding household expenses.

In studying this table it is seen that about 15.5 per cent of all operatives received more than a rural school education; about 1 man out of every 7. The table shows that the better-educated man operated larger acreage, 178.2 acres to 134.0; a gain of some 33 per cent. The educated man owns four-fifths of the land he operates while the less-educated man owns only a little over three-fifths. The investment of the better educated farmer is 11 per cent higher than that of the man with little or no formal education. The better-educated farmers also keep more live stock, handle more crops with each workman employed and do about one-fifth more business.

The farmer with less education, as recorded in this chart, sells almost 25 per cent more of his crop than does his better educated neighbor; i.e. 27.1 per cent to 30.7 per cent. The crop index figure of the first group, 97.0 means that these farms are producing 3 per cent below the average farms in that section while the figure for the second group, 102.0 means that these farms are producing 2 per cent above the average of the farms in the same section. Living conditions being at all equal, the farmer whose farm produces less will, of course, be obliged to sell more of his crop to meet his expenses. The second group of farms is also occupying better yielding land undoubtedly.

The labor income of the man receiving a district school education only is $382 while that of the better-educated farmer is $655 or a gain of over 71 per cent. The labor income of a farmer is what is left of his gross income after he has deducted all farm expense, the family hired man's wages and 5 per cent interest on his invested capital. This residue represents returns for his own labor and management and is in addition to the house he lives in and the products which have furnished him and his family a living. While the better-educated man receives 71 per cent greater labor income, the chart shows that his annual family expenses increase only some $60. A careful consideration of these figures can only lead to the conclusinn that the farmer with more school training gets along better.

If we were to allow for differences in the size of these farm operations or were to adjust the larger to the smaller area, the man with a better education would still be earning 40 per cent greater income. The fact that this second group of farmers gets a little better yield on their farms, keeps more live stock, and has a system that seems to furnish more productive labor, indicates greater ability in organizing and handling the farm business. The educated farmer makes enough larger labor income to pay interest on $5,500 more of invested capital than does the less educated man; allowing again for a difference in size of farms operated, the educated farmer would still be paying interest on $3,700 increased investment. Really this all means that the farmer who received mental training has increased his efficiency to the extent of easily taking care of an increased capital investment represented by the $3,700 not a bad return for the short time he spent in school.

Wisconsin

A study of 325 farms made in this state bear out the general conclusions drawn from other surveys. The following table gives the annual income of these farmers as found by the University of Wisconsin in a recent survey:

Education of farmers	Annual income
Common school	$1,630.00
Short course	1,980.00
High school	2,168.00
College	2,436.00

The college graduate in Wisconsin evidently earns 50 per cent more annually than does the man with only a common school education. An interesting fact learned in this survey was that those farmers who have a high school education acquired ownership of their farms in about 7 years while it took 10 years for those with only a common school education to acquire a clean title.

The University also found some interesting figures concerning the value of farm residences during this survey. Grouping these according to the education

of the farmers they are as follows:

Education of farmers	Average value of farm home
Common school	$1,764.00
Short course	1,837.00
High School	1,939.00
College	2,552.00

Another enlightening chart that the University has issued concerns home and life convenience.

	Percentage with			
	Bathrooms	Modern lighting system	Furnaces	Automobiles
Common school	22	17	22	20
Short course	24	22	30	24
High School	27	21	30	25
College	49	44	47	29

Ohio

A survey made in Ohio by the State University found that the farmer with an agricultural education earned $5.00 for every $1.00 earned by the farmer with a common school education only. The following averages were found:

Education of farmers	Average yearly labor earnings
Common school	$278.00
High School	325.00
More than high school	707.00
Agricultural College	1,422.00

In this state it was found that a farmer with a high school education earned 16.0 per cent more than the farmer with the common school education; that one with more than a high school education, earned 154 per cent more and that a college graduate earned over 5 times as much or 411 per cent more. The value of a formal education for a farmer in Ohio seems to be very conclusive.

Washington.

That the value of an education to the farmer is as great on the Pacific Coast

as it is in other parts of our country seems borne out by a research recently made by Proferror Edward C. Johnson of the College of Agriculture in that State. Dr. Johnson investigated the earnings of graduates of four years or more standing and found that the average increased earnings per man were $1,453 a year. This sum represents an annual return of 6 per cent on an investment of more than $24,000. Not a bad return for approximately four years of college work.

Maryland.

The value of completing a college course is shown in the survey recently made of its graduates by the Maryland College of Agriculture:

Attend college	Average income first year	Average income 1922
One year	$754.00	$1,161.00
Three years	884.00	2,002.00
Four years	1,269.00	2,233.00

This chart shows that in his first year of work after leaving college, the four year man earned 43.5 per cent more than the three year man and 68.3 per cent more than the one year man. In 1922, the four year man's labor income was almost double that of the one year man, and while the one year man's income was increasing 52.6 per cent, the four years man's income increased 76.1 per cent. The dollar increase of the four year over the one year man was $1,072; with an average of 40 years of working life, this would give the agricultural college graduate, a total of $42,880 income due directly to the extra three years attendance at college.

New York.

A very complete survey was made in 1911 by Cornell University, N.Y., of a number of farms in Tompkins County of that State. In the 7 townships of Ithaca, Dryden, Danby, Lansing, Ulysses, Enfield and Newfield, 859 farmers attended schools of some description. This group was divided into three heads; district

school, high school and more than high school. The first group included those farmers whose education was limited to the regular district school; the second or high school group attended some high school, normal school, business school or took short courses in agriculture; the last group embraced those who attended a college or university. There were other farmers in this area who had a partial district school education but they are not included in this report.

The following chart shows the results of this study:

Number of Farmers in Each Educational Group, 696 Farmers. 163 Tenants.

Education	Owners		Tenants	
	Number	Per cent of total	Number	Per cent of total
District school	487	70%	135	83%
High school	195	28	28	17
More than high school	14	2	0	0

From this chart it is seen that the owners as a class had a better education than the tenants. Of the 696 owners, 28 per cent had a high school education and 2 per cent a college training, while only 17 per cent of the tenants had a high school training and none had gone to college.

Education in four of the townships of this group are given in the following table:

Education in Different Townships.

Education.	Ithaca per cent of total.	Dryden per cent of total	Danby per cent of total	Lansing per cent of total
District school	62%	69%	77%	77%
High school	33	31	22	21
More than high school	5	*	1	2

*Less than 1 per cent.

As is to be expected, the farmers of Ithaca township have taken greater advantage of their schools. Ithaca has established an excellent school system and the township is also the seat of Cornell University. In Ithaca, 38% of the farmers have more than a district school education while in Danby and Lansing, this percentage decreases to 23 per cent. Dryden showed less than 1 per cent of its farmers with a college education.

The table giving profits and education shows some interesting deductions.

Profits and Education. 573 Owners, 137 Tenants

Education.	Farms Operated by Owners.		Farms Operated by Tenants	
	Number of farmers.	Owner's labor income	Number of	Tenant's labor income.
District school	398	$318	113	$407
High school	165	622	24	473
More than high school	10	847	0	0

The average labor income of owners varies from $318 for district school graduates to $847 for college men; this is an increase of 161 per cent. The increase in labor income of the high school farmer over the one with a district school education is $304 or what would be a 5 per cent interest on $6,080.00 As the report terms it, "In other words, the high school education of a farmer is equivalent on an average, to $6,000 worth of 5 per cent bonds".

The average increase in labor income for the tenant is not so great, being $66.00 for the high school man over the district school man. This is an increase of about 15 per cent. There are many local factors entering into an interpretation of this condition that do not warrant detailed discussion.

A table showing the variations in labor income in each education group for 573 owners is presented:

Variations in Labor Income in Each Education Group
573 Owners.

Labor Income	District School.		High School		More than High School.	
	Number of farmers.	Per cent of total.	Number of farmers.	Percent of total.	Number of farmers.	Per cent of total.
$400 or less	251	64%	71	43%	4	40%
401-1,000	126	31	62	37	3	30
Over 1,000	21	5	32	20	3	30

Only 5 per cent of the farmers having a district school education made a labor income of over $1,000 while 20 per cent with a high school training and 30 per cent with a college education passed this mark. As the report says "Higher education does not insure greater profits in every case-****-(but) ****. Apparently the possibilities of success in farming increase with the extent of education just as they do in any other profession".

Education Related to Profits with Equal Capital, 573 Owners.

	District School		More than District School.	
	Number of farmers.	Labor income.	Number of farmers.	Labor income.
$2,000 or less	31	$187	3	$286
2,001-4,000	146	241	36	275
4,001-6,000	122	393	49	466
6,001-8,000	50	395	40	709
8,001-10,000	28	618	13	796
10,001-15,000	18	525	25	1,091
Over 15,000	3	1,054	9	1,272
Average		$483		$699

In this chart, farmers of different groups but with the same capital are compared. In every instance noted, the farmer with more than district school education made a larger labor income on the same capital than the farmer with only a district school training. The average incressed labor income for the total of these two groups is 43.2 per cent; a very good argument for high

school and college training as a financial investment. As only a few of these farmers went to an agricultural college or received direct agricultural instruction, it follows that even an ordinary high school training is extremely beneficial in affording a mental stimulus that reflects itself in an increased earning capacity. If more of these farmers had had a professional agricultural training, the difference would have been much greater and the 43.2 per cent would have been materially increased.

A survey of 247 farmers in Jefferson County offers some interesting facts regarding ages as well as incomes.

Capital	Education	Average Age Years	Average labor income.
$1,000 or less	Common School	36	$318.00
	High School	29	359.00
$1,001 to #2,000	Common School	37	561.00
	High School	31	659.00
$2,001 to $3,000	Common School	40	864.00
	High School	28	866.00
Over $3,000	Common School	40	1,086.00
	High School	37	2,087.00

In every case the farmer with a high school education was making more at a lower age than the common school farmer with equal capital invested. The farmers with a common school education, naturally were older than the high school farmers when the survey was made. The high school graduateswith $1,000 capital was making $41,00 more of average labor income at 29 years of age than the common school farmer at 36 with an equal capital invested and in the $3,000 class the high school graduate was making $1,000 more at 37 than the common school graduate was making at 40.

Another study of 404 farmers in this same country found that farm operators with a high school education became tenants 2 years younger and farm owners 4 years younger than farmers with a district school education only. The following figures were obtained from this study:-

Farmers with	Capital above debts.	Average labor income.
District school education only	$ 6,488.00	$464.00
High School education only	10,000.00	761.00

The increase in capital was a little over 54 per cent while the increase in average labor income was 64 per cent for the farmer with a high school education over the farmer who only had a district school training.

A search through "Who's Who" and similar publications shows that only one person out of every 150,000 who have had no schooling ever reaches distinction in this country. Out of every 37,500 who have had a common school education only one has achieved emminence, while one out of 1,724 high school graduates and one out of every 187 college graduates have done anything to warrant their names being placed in such publications. Parents who give their children a common school education give them four times the chance to become a leader that a child of no education has. A high school education will give them 87 times the chance and a college education will give 800 times the chance.

Any youth who intends to become a farmer or enter any of the professional lines of agriculture should have an agricultural education. Just as doctors and lawyers need to be educated in their professions, so should a farmer be educated in his. Without an exception, every study made shows that the man with the greater training enjoys the greater prosperity. Education is well worth the many hard sacrifices it often demands in an increased ability to live well and to serve our fellowman acceptably.